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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/537,314

01/04/2006

Shojiro Kawakami

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38834

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09/07/2006

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EXAMINER

NGUYEN, TU T

ART UNIT

PAPER NUMBER

2877

DATE MAILED: 09/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/537,314

Applicant(s)

KAWAKAMI ET AL.

Examiner

Tu T. Nguyen

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6 is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5,8-13 and 15 is/are rejected.
- 7) ☒ Claim(s) 3,7,14,16 and 17 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Abstract

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The abstract of this application has more than 150 words.

Claim Objections

Claim 1 is objected to because of the following informalities:

Claim 1, line 3, "andz" should be changed to " and z".

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2,4-5,8-13,15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawakami (EP 1 103 829) in view of Lowe (4,902,112).

With respect to claim 1, Kawakami disclose polarizer array which has a multilayer structure 2 (fig 1) in which at least two transparent materials 1 (fig 1) are alternately laminated in a z direction on one substrate parallel to an x-y plane in an orthogonal coordinate system x, y, and z, each layer has one-dimensional periodic concave and convex shapes repeated in one direction defined in each region on the x-y plane (paragraph [0017], with respect to light being incident on the x-y plane in a perpendicular or oblique direction.

Kawakami does not explicitly disclose only a polarized light parallel or perpendicular to the concave and convex shape in each region is transmitted as claimed. Since Kawakami discloses that the pitch and the arranged structure of the grooves could be changed (paragraphs [0017] – [0018]), it would have been obvious to modify Kawakami's grooves with different arranged structure or pitch to transmit the polarized light as claimed for using the polarizer in different environments.

Kawakami does not disclose dividing the multilayer structure into at least three regions in the x-y plane. Lowe discloses a transmitting device. The device comprises: a substrate 82 (fig 8) having multiple polarized regions 122,124,126 (fig 8) for transmitting light having different polarizations. It would have been obvious to modify Kawakami by dividing the substrate into plurality of regions for transmitting light having different orientations taught by Lowe (abstract) for different uses.

With respect to claim 2, Since Kawakami discloses that the pitch and the arranged structure of the grooves could be changed (paragraphs [0017] – [0018]), it would have been obvious to modify Kawakami's grooves with different arranged structure or pitch for different uses.

With respect to claims 4-5, Kawakami does not disclose a light-receiving array or a quarter waveplate as claimed. However, the claimed light-receiving array or the quarter waveplate would have been known. It would have been obvious to modify Kawakami with the known light array or the quarter waveplate to detecting the output light of the polarizer to measure the quality of the substrate.

With respect to claims 8-13,15, Kawakami disclose the claimed invention except for a CCD, image pickup tube, means for splitting light and means for controlling polarization as claimed. However, it would have been obvious to cooperate Kawakami's polarizer with the claimed limitations above for different intended uses.

Allowable Subject Matter

Claim 6 is allowed.

As per claim 6, the prior arts of record, taken alone or in combination, fail to disclose or render obvious a multilayer structure being divided into at least two regions in the x-y plane, each layer has one-dimensional periodic concave and convex shapes parallel to the x-axis direction in at least one of the regions, each layer is flat in at least

one of the other regions, and a phase difference between orthogonal polarized light is given to light which is incident in a direction unparallel to the substrate and which is transmitted through the region having the one-dimensional periodic concave and convex shapes, in combination with all the limitations in the claim.

Claims 3, 3/4, 7, 14, 16-17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

As per claim 3, the prior arts of record, taken alone or in combination, fail to disclose or render obvious at least one region in which the repeating direction of the one-dimensional periodic concave and convex shapes is set at 0 degree to an x axis, at least one region in which the repeating direction of the one-dimensional periodic concave and convex shapes is set at 45 degrees to the x axis, and at least one region in which the repeating direction of the one-dimensional periodic concave and convex shapes is set at 90 degrees to the x axis, in combination with all the limitations in the base claim.

As per claim 7, refer to the reasons discussed in claim 6 above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tu T. Nguyen whose telephone number is (571) 272-2424. The examiner can normally be reached on T-F 7:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Toatley Jr. can be reached on (571) 272-2800 Ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Tu T. Nguyen
Primary Examiner
Art Unit 2877

08/26/2006